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2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,000	MANABE, SHIZUO	
	Examiner	Art Unit	
	JIN-CHENG WANG	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6-9 and 11-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4, 6-9 and 11-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's submission filed on 7/1/2011 has been entered. The claim 1 has been amended. Claims 2-3, 5 and 10 have been canceled. Claims 11-26 have been newly added. Claims 1 and 4, 6-9 and 11-26 are pending in the present application.

Response to Arguments

Applicant's arguments filed July 1, 2011 have been fully considered but are moot in view of the new ground(s) of rejection set forth in the this Office Action.

With respect to the newly submitted claim 11, Kobarai teaches a computer program product in a tangible non-transitory computer readable medium, the computer program product being configured to control a horizontal placement, the horizontal placement including the steps of:

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segments (*e.g., At Drawing #3, guide lines including at least two horizontal prospective guide lines within each circumscribed quadrangle 6 and at least one center line are drawn.*

Guide lines including at least two horizontal prospective guide lines for each circumscribed quadrangle 5 and at least one centerline of the quadrangles are drawn.

At Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold wherein

the lines are drawn as virtual horizontal lines in the Drawing #6 as regular scan lines on a display at regular time intervals in the demarcated region 4);

Aligning an area in a character string region to a reference line of the imaginary guide lines, said area being positioned within said one of the demarcated region (*Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines along with the centerline of the quadrangle 6 (the centerline is the reference line). Kobari teaches drawing at least two horizontal prospective guide lines along with one centerline by drawing at least two horizontal lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or at least three horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel*);

Wherein said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area (*Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. Thus, Kobari's guide lines are longer than the area of the character string and Kobari's centerline is between adjacent ones of the guide lines for the circumscribed quadrangle.*

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses specifying a centerline as clearly indicated in the Drawing#5 and Drawing #8 that a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Imhof teaches a computer program product embodied in a tangible non-transitory computer-readable medium, the

computer program product being configured to control a horizontal placement, the horizontal placement including the steps of (Page 136-137 and Figs. 55-60 where each character string is placed uniformly on a rectangle map region or polygon region or a demarcated region):

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segments (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region; see Page 136, it is best to divide long names into two or three horizontal lines and each division should be a whole word; see also Figs. 16 and 18 where a plurality of guide lines are shown. See also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137. The typeline is a centerline of the labeling name characters.*

Moreover, Imhof teaches at FIGS. 55-56 the demarcated regions 3 with multiple guide lines and one of the multiple guide lines is a reference line of a character string);

Aligning an area in a character string region to a reference line of the imaginary guide lines, said area being positioned within said one of the demarcated regions (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines; see also Figs. 16 and 18 where a plurality of guide lines are shown; see also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline---*

reference line--- and thus the names are placed along a centerline or a typeline or reference line of Page 137.

Moreover, Imhof teaches at FIGS. 55-56 the demarcated regions 3 with multiple guide lines and one of the multiple guide lines is a reference line of a character string);

Wherein said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated region being longer than said area (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters.*

Moreover, Imhof teaches at FIGS. 55-56 the demarcated region 3 having at least four guide lines ad at least one reference line of the guide lines is between adjacent ones of the guide lines).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Edmondson teaches a computer program product embodied in a tangible non-transitory computer readable medium, the computer program product being configured to control a horizontal placement, the horizontal placement including the steps of (Figs. 3-4):

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segments (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Aligning an area in a character string region to a reference line of the imaginary guide line, said area being positioned within said one of the demarcated regions (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Wherein said reference line of the imaginary line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where at least the baseline is located at the center of the arrangement of Fig. 3. Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where the character string is arranged uniformly).

Applicant argues with respect to the Kobari reference that the guide lines of Kobari are arranged in parallel, but not at regular intervals. The Examiner respectfully disagrees. In a non-limiting example, when all guide lines are not arranged at a singular regular interval in which

guide lines arranged at a first regular interval and guide lines arranged at a second regular interval meets the claimed guide lines arranged at regular intervals, all guide lines are still arranged at regular intervals including the first regular interval and the second regular interval. Moreover, for argument's sake, even if Applicant may import limitations from the Specification, Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval. Kobari's three guide lines arranged in parallel in the first regular interval constitute two guide lines arranged in the first regular interval and two other guide lines arranged in the first regular interval. The three guide lines together are the claimed guide lines arranged in parallel at regular intervals.

Kobari teaches at Drawing #5 plural prospective guide lines embedded with the plural rectangles. The prospective guide lines for one rectangle are arranged in parallel at a first regular interval and the prospective guide lines for the other rectangle may be arranged in parallel at a second regular interval, meeting the claimed guide lines arranged at regular intervals.

Applicant further argues that Fig. 3 of Kobari only show two guide lines for the circumscribed quadrangle 6. The Examiner cannot concur. Fig. 3 of Kobari also shows a centerline. The centerline is clearly drawn in Fig. 3 of Kobari. Applicant ignores the centerline in Fig. 3 of Kobari for arguments' sake. The centerline in Fig. 3 of Kobari cannot be ignored. Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval.

Kobari further teaches selecting a rectangle to place a character string which is the same as specifying the respective parallel horizontal guide lines including a centerline for the

rectangle. Moreover, Kobari teaches at Drawing #3 specifying a centerline for the circumscribed rectangle 6. The centerline is specified so as a character string is placed along the centerline.

In Page 10 of Remarks, Applicant argues in essence with respect to the claimed placing the character string along one of the specific prospective guide lines.

In response, Kobari discloses at Drawing #3 at least three horizontal prospective guide lines including two guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6. Kobari teaches specifying at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of each quadrangle as drawn in the figure, meeting the claimed prospective guide line(s). Kobari teaches selecting the circumscribed quadrangle 6 and selecting the prospective guide lines by selecting the circumscribed quadrangle 6 and placing the character string along the centerline of the prospective guide lines. Kobari teaches specifying a centerline so as to place a character string within the circumscribed quadrangle 6. Placing the character string within the circumscribed quadrangle 6 includes the steps of specifying the respective rectangle to place a character string within the circumscribed quadrangle 6 and placing the character string along the centerline of the quadrangle 6. Kobari teaches specifying a centerline for the particular character string being placed along the centerline.

Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines. Kobari teaches drawing at least two horizontal prospective guide lines by drawing each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and

Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel.

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line,

meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari does not expressly disclose the prospective guide lines. However, Kobari teaches a typeline where the characters are positioned or placed horizontally along the center of each rectangle and thus the typeline is the centerline implicitly taught by Kobari. Kobari expressly disclose at Drawing #5 that the guide lines are arranged at regular intervals.

For the reasons above, Imhof and/or Edmondson teaches horizontally positioning/placing along the center of each bounding rectangle with horizontal guide lines. Imhof teaches at FIGS. 16-17 that the grid lines (guide lines) are arranged at regular intervals.

Fushiki et al. discloses producing scan lines to determine string placement (Fig. 4a). Fushiki teaches at Fig. 6 and column 6 that the region's perimeter will not intersect text written within the region in which the text is placed within the rectangle box 530 and/or Rectangle 532 wherein the text includes at least one character string placed along the centerline of the rectangle box 530 and/or Rectangle 532 that is located at the center of the prospective guide lines that are longer than the longest horizontal segment of the area of the character string because the character string is placed within the text box. At least the five guide lines in Fig. 6 are arranged in parallel and at least one character string (of the text) is placed along the center line of the text box 530 or the text box 532.

It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a label.

Applicant argues with respect to Kobari's reference separately with each of Kobari's drawings. However, Applicant failed to recognize that the claim invention is drawn based on a combination of the embodiments of several figures in Applicant's Specification. Kobari clearly teaches at Drawing #5 a plurality of guide lines arranged at the regular intervals or equal intervals. Kobari teaches at Drawing #5 the claim limitation of drawing prospective guide lines as virtual horizontal lines arranged in parallel at equal intervals within a demarcated region so that multiple candidate positions of placing a character string can be formed in parallel within the demarcated region at the equal intervals by the prospective guide lines, each of the prospective

guide lines having a length defined by opposite lines among lines that form the demarcated region.

Kobari teaches the claimed means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Kobari Drawing#3, Drawing #6 and Drawing#8 where each character string is placed uniformly on a demarcated region).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Imhof teaches an apparatus for optimizing character string placing (Page 136-137 and Figs. 55-60 where each character string is placed uniformly on a rectangle map region or polygon region or a demarcated region) comprising:

Means for drawing prospective guide lines as virtual horizontal lines arranged in parallel at regular intervals in the demarcated region (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region; see Page 136, it is best to divide long names into two or three horizontal lines and each division should be a whole word; see also Figs. 16 and 18 where a plurality of guide lines are shown. See also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137. The typeline is a centerline of the labeling name characters*);

Means for selecting, from among the prospective guide lines, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of a character string (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines; see also Figs. 16 and 18 where a plurality of guide lines are shown; see also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137*);

Means for specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline*

and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters); and

Means for placing the character string along said one of the specific prospective guide lines (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters*); and

Means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (*Figs. 8-15 and 57 and 59 where the character labels are placed uniformly within a rectangle region, an arbitrary demarcated region or a polygon region. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline of the grid lines, or a centerline of*

the boundary lines or a typeline of the labeling name characters and thus the names are placed along a centerline or a typeline of Page 137 or the centerline of the grid lines or the centerline of the boundary lines).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Edmondson teaches an apparatus for optimizing character string placing (Figs. 3-4) comprising:

Means for drawing prospective guide lines as virtual horizontal lines arranged in parallel at regular intervals in the demarcated region (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Means for selecting, from among the prospective guide lines, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of a character string (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Means for specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where at least the baseline is located at the center of the arrangement of Fig. 3); and

Means for placing the character string along said one of the specific prospective guide lines (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where character string is placed along said centerline); and

Means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where the character string is arranged uniformly).

Applicant argues with respect to the Kobari reference that the guide lines of Kobari are arranged in parallel, but not at regular intervals. The Examiner respectfully disagrees. In a non-limiting example, when all guide lines are not arranged at a singular regular interval in which guide lines arranged at a first regular interval and guide lines arranged at a second regular interval meets the claimed guide lines arranged at regular intervals, all guide lines are still arranged at regular intervals including the first regular interval and the second regular interval. Moreover, for argument's sake, even if Applicant may import limitations from the Specification, Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line wherein the guide lines are arranged at a regular interval. Kobari's three guide lines arranged in parallel in the first regular interval constitute two guide lines arranged in the first regular interval and two other guide lines arranged in the first regular interval. The three guide lines together are the claimed guide lines arranged in parallel at regular intervals.

Kobari teaches at Drawing #5 plural prospective guide lines embedded with the plural rectangles. The prospective guide lines for one rectangle are arranged in parallel at a first regular

interval and the prospective guide lines for the other rectangle may be arranged in parallel at a second regular interval, meeting the claimed guide lines arranged at regular intervals.

Applicant further argues that Fig. 3 of Kobari only show two guide lines for the circumscribed quadrangle 6. The Examiner cannot concur. Fig. 3 of Kobari also shows a centerline. The centerline is clearly drawn in Fig. 3 of Kobari. Applicant ignores the centerline in Fig. 3 of Kobari for arguments' sake. The centerline in Fig. 3 of Kobari cannot be ignored. Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval.

Kobari further teaches selecting a rectangle to place a character string which is the same as specifying the respective parallel horizontal guide lines including a centerline for the rectangle. Moreover, Kobari teaches at Drawing #3 specifying a centerline for the circumscribed quadrangle 6, as opposed to selecting other possible circumscribed quadrangles. The centerline is specified so as a character string is placed along the centerline.

Applicant argues in essence with respect to the claimed placing the character string along one of the specific prospective guide lines.

Kobari discloses at Drawing #3 at least three horizontal prospective guide lines including two guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6. Kobari teaches specifying at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of each quadrangle as drawn in the figure, meeting the claimed prospective guide line(s). Kobari teaches selecting the circumscribed quadrangle 6 and selecting the prospective guide lines by selecting the circumscribed quadrangle 6 and placing the character string along the centerline of the

prospective guide lines. Kobari teaches specifying a centerline so as to place a character string within the circumscribed quadrangle 6. Placing the character string within the circumscribed quadrangle 6 includes the steps of specifying the respective rectangle to place a character string within the circumscribed quadrangle 6 and placing the character string along the centerline of the quadrangle 6. Kobari teaches specifying a centerline for the particular character string being placed along the centerline.

Applicant argues with respect to the claim 1 and similar claims that Fushiki fails to teach placing a character string along a prospective guide line that is located at the center of prospective guide lines that are longer than the longest horizontal segment of the area of the character string. The Examiner cannot concur. Fushiki teaches at Fig. 6 and column 6 that the region's perimeter will not intersect text written within the region in which the text is placed within the rectangle box 530 and/or Rectangle 532 wherein the text includes at least one character string placed along the centerline of the rectangle box 530 and/or Rectangle 532 that is located at the center of the prospective guide lines that are longer than the longest horizontal segment of the area of the character string because the character string is placed within the text box. At least the five guide lines in Fig. 6 are arranged in parallel and at least one character string (of the text) is placed along the center line of the text box 530 or the text box 532.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For example the claim 1 recites "each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region". Applicant speculated the claim limitation of "each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region". Applicant's Specification failed to disclose such a claim limitation. The Specification failed to define the length of each of the prospective guide lines, let alone that the length of each of the prospective guide lines is defined by opposite lines among lines that form the demarcated region. For example, in FIG. 2B, 3B and 1C of the Specification, the length of each of the prospective guide lines is remote from the length of the opposite lines among lines that form the demarcated region. There is no connection between the length of each of the prospective guide lines and the (length) of the opposite lines among lines that form the demarcated region. The boundary lines of the demarcated region are often un-regularly arranged as the demarcated region can be a region of any shape. The claim 4 depends upon the claim 1 and is rejected due to its dependency on the claim 1.

Claims 11-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For example the claim 11 recites "where said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area" is not enabled by the Specification. The claim 11 also recites aligning an area in a character string region to a reference line of the imaginary guide lines. The reference line is in fact defined in the claim as one of the imaginary guide lines. Thus, it cannot be said that said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines. For example, the second imaginary guide line is between the first imaginary guide line and the third imaginary guide. If the second imaginary guide line is a reference line, the second imaginary guide line is between the first imaginary guide line and the third imaginary guide line. But, the second imaginary guide line (said reference line of the imaginary guide lines) is NOT between adjacent ones of the imaginary guide lines because the first imaginary guide line and the third imaginary guide are NOT adjacent. The claims 12-26 depend upon the claim 11 and are rejected due to their dependency on the claim 11.

Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example the claim 1 recites "each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region". Applicant speculated the claim limitation of "each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region". Applicant's Specification failed to disclose such a claim limitation. The Specification failed to define the length of each of the prospective guide lines, let alone that the length of each of the prospective guide lines is defined by opposite lines among lines that form the demarcated region. For example, in FIG. 2B, 3B and 1C of the Specification, the length of each of the prospective guide lines is remote from the length of the opposite lines among lines that form the demarcated region. There is no connection between the length of each of the prospective guide lines and the (length) of the opposite lines among lines that form the demarcated region. The boundary lines of the demarcated region are often un-regularly arranged as the demarcated region can be a region of any shape. The claim 4 depends upon the claim 1 and is rejected due to its dependency on the claim 1.

Claims 11-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example the claim 11 recites "where said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area" is vague and ambiguous. The claim 11 also recites aligning an area in a character string region to a reference line of the imaginary guide lines. The reference line is in fact defined in the claim as one of the imaginary guide lines. Thus, it cannot be said that said reference line of the imaginary guide lines is between adjacent

ones of the imaginary guide lines. For example, the second imaginary guide line is between the first imaginary guide line and the third imaginary guide. If the second imaginary guide line is a reference line, the second imaginary guide line is between the first imaginary guide line and the third imaginary guide line. But, the second imaginary guide line (said reference line of the imaginary guide lines) is NOT between adjacent ones of the imaginary guide lines because the first imaginary guide line and the third imaginary guide are NOT adjacent.

The claims 12-26 depend upon the claim 11 and are rejected due to their dependency.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example the claim 15 recites "a neighboring one of the demarcated regions". The demarcated regions have been recited in the claim. It is not clear which demarcated region is the claimed one of the demarcated regions and which demarcated region is a neighboring one of the demarcated regions. It is not clear on its own right that a neighboring one of the demarcated regions is one of the demarcated regions or another one of the demarcated regions or a demarcated region other than said demarcated regions. Clarification is required. The claim 15 also recites "said longest one of the demarcated region segments". Since said character string region is placed in a neighboring one of the demarcated regions as claimed, it is not vague and ambiguous whether said longest one of the demarcated region segments refer to one of the demarcated regions or a neighboring one of the demarcated regions. Clarification is required.

Claims 14-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example the claim 14 recites “the longest one of the demarcated region segments". The claimed one of the demarcated regions may not be a polygon and may be a circular region. There are no demarcated region segments for a circular demarcated region. Since the demarcated region segments are not well defined in the claim 11 for one of the demarcated regions, the longest one of the demarcated region segments is not well defined and does not make sense. The claims 15-25 depend upon the claim 14 and are rejected due to their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) and Ozawa US Patent Application Publication 2004/0001628 (hereinafter Ozawa), Freeman et al. (US Pat. No. 5,724,072), E. Imhof, "Positioning Names on Maps", The American Cartographer, 1975, Vol. 2, No. 2, pp. 128-144 (hereinafter Imhof) and S. Edmondson, et al, “A

General Cartographic Labeling Algorithm", Cartographica, 1997, Vol. 33, No. 4, pp. 13-23 (hereinafter Edmondson).

In re claim 1, Kobari teaches an apparatus for optimizing character string placing (Kobari Drawing #2) comprising:

Means for drawing prospective guide lines as virtual horizontal lines arranged in parallel at equal intervals within the demarcated region, so that multiple candidate positions of placing a character string can be formed in parallel within the demarcated region at the equal intervals, each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region (*e.g., At Drawing #3, guide lines including at least two horizontal prospective guide lines within each circumscribed quadrangle 6 and at least one center line are drawn.*

Kobari teaches at Drawing #5 plural prospective guide lines embedded with the plural rectangles. The prospective guide lines for one rectangle are arranged in parallel at a first regular interval and the prospective guide lines for the other rectangle may be arranged in parallel at a second regular interval, meeting the claimed guide lines arranged at regular intervals.

Guide lines including at least two horizontal prospective guide lines for each circumscribed quadrangle 5 and at least one centerline of the quadrangles are drawn.

At Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold wherein

the lines are drawn as virtual horizontal lines in the Drawing #6 as regular scan lines on a display at regular time intervals in the demarcated region 4);

Means for selecting, from among the prospective guide lines formed within the demarcated region, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of the character string (*Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines along with the centerline of the quadrangle 6. Kobari teaches drawing at least two horizontal prospective guide lines along with one centerline by drawing at least two horizontal lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or at least three horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel*);

Means for specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (*Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses specifying a centerline as clearly indicated in the Drawing#5 and Drawing #8 that a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8*); and

Means for placing the character string along said one of the specific prospective guide lines (*Kobari discloses at Drawing #3 at least three horizontal prospective guide lines including two guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6. Kobari teaches specifying at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of each quadrangle as drawn in the figure, meeting the claimed prospective guide line(s). Kobari teaches selecting the circumscribed quadrangle 6 and selecting the prospective guide lines by selecting the circumscribed quadrangle 6 and placing the character string along the centerline of the prospective guide lines. Kobari teaches specifying a centerline so as to place a character string within the circumscribed quadrangle 6. Placing the character string within the circumscribed*

quadrangle 6 includes the steps of specifying the respective rectangle to place a character string within the circumscribed quadrangle 6 and placing the character string along the centerline of the quadrangle 6. Kobari teaches specifying a centerline for the particular character string being placed along the centerline.

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses specifying a centerline as clearly indicated in the Drawing#5 and Drawing #8 that a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least three parallel guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6.

Kobari further teaches at least three parallel guide lines including at least two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of the quadrangles, meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than

a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string); and

Means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Kobari Drawing#3, Drawing #6 and Drawing#8 where each character string is placed uniformly on a demarcated region).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Imhof teaches an apparatus for optimizing character string placing (Page 136-137 and Figs. 55-60 where each character string is placed uniformly on a rectangle map region or polygon region or a demarcated region) comprising:

Means for drawing prospective guide lines as virtual horizontal lines arranged in parallel at equal intervals within the demarcated region so that multiple candidate positions of placing a character string can be formed in parallel within the demarcated region at the equal intervals by the prospective guide lines, each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region has more*

than four guide lines where the guide lines can be arranged at equal intervals; see Page 136, it is best to divide long names into two or three horizontal lines and each division should be a whole word; see also Figs. 16 and 18 where a plurality of guide lines are shown. See also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137. The typeline is a centerline of the labeling name characters);

Means for selecting, from among the prospective guide lines formed within the demarcated region, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of the character string (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines; see also Figs. 16 and 18 where a plurality of guide lines are shown; see also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137*);

Means for specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and*

labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters); and

Means for placing the character string along said one of the specific prospective guide lines (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters*); and

Means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (*Figs. 8-15 and 57 and 59 where the character labels are placed uniformly within a rectangle region, an arbitrary demarcated region or a polygon region. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline of the grid lines, or a centerline of the boundary lines or a typeline of the labeling name characters and thus the names are placed along a centerline or a typeline of Page 137 or the centerline of the grid lines or the centerline of the boundary lines*).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Edmondson teaches an apparatus for optimizing character string placing (Figs. 3-4) comprising:

Means for drawing prospective guide lines as virtual horizontal lines arranged in parallel at equal intervals within the demarcated region, so that multiple candidate positions of placing a character string can be formed in parallel within the demarcated region at the equal intervals, each of the prospective guide lines having a length defined by opposite lines among lines that form the demarcated region (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Means for selecting, from among the prospective guide lines formed within the demarcated region, specific prospective guide lines that are arranged in parallel and are longer

than a longest horizontal segment of an area of a character string (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Means for specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where at least the baseline is located at the center of the arrangement of Fig. 3); and

Means for placing the character string along said one of the specific prospective guide lines (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where character string is placed along said centerline); and

Means for centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where the character string is arranged uniformly).

Applicant argues with respect to the Kobari reference that the guide lines of Kobari are arranged in parallel, but not at regular intervals. The Examiner respectfully disagrees. Applicant's claim 1 requires plural regular intervals which is a broad term. What is reasonable interpretation of the claimed regular intervals? In a non-limiting example, when all guide lines are not arranged at a singular regular interval in which guide lines arranged at a first regular interval and guide lines arranged at a second regular interval meets the claimed guide lines arranged at regular

intervals, all guide lines are still arranged at regular intervals including the first regular interval and the second regular interval. Moreover, for argument's sake, even if Applicant may import limitations from the Specification, Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval. Kobari's three guide lines arranged in parallel in the first regular interval constitute two guide lines arranged in the first regular interval and two other guide lines arranged in the first regular interval. The three guide lines together are the claimed guide lines arranged in parallel at regular intervals.

Kobari teaches at Drawing #5 plural prospective guide lines embedded with the plural rectangles. The prospective guide lines for one rectangle are arranged in parallel at a first regular interval and the prospective guide lines for the other rectangle may be arranged in parallel at a second regular interval, meeting the claimed guide lines arranged at regular intervals.

Applicant further argues that Fig. 3 of Kobari only show two guide lines for the circumscribed quadrangle 6. The Examiner cannot concur. Fig. 3 of Kobari also shows a centerline. The centerline is clearly drawn in Fig. 3 of Kobari. Applicant ignores the centerline in Fig. 3 of Kobari for arguments' sake. The centerline in Fig. 3 of Kobari cannot be ignored. Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval.

Kobari further teaches selecting a rectangle to place a character string which is the same as specifying the respective parallel horizontal guide lines including a centerline for the rectangle. Moreover, Kobari teaches at Drawing #3 specifying a centerline for the circumscribed rectangle 6. The centerline is specified so as a character string is placed along the centerline.

In Page 10 of Remarks, Applicant argues in essence with respect to the claimed placing the character string along one of the specific prospective guide lines.

In response, Kobari discloses at Drawing #3 at least three horizontal prospective guide lines including two guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6. Kobari teaches specifying at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of each quadrangle as drawn in the figure, meeting the claimed prospective guide line(s). Kobari teaches selecting the circumscribed quadrangle 6 and selecting the prospective guide lines by selecting the circumscribed quadrangle 6 and placing the character string along the centerline of the prospective guide lines. Kobari teaches specifying a centerline so as to place a character string within the circumscribed quadrangle 6. Placing the character string within the circumscribed quadrangle 6 includes the steps of specifying the respective rectangle to place a character string within the circumscribed quadrangle 6 and placing the character string along the centerline of the quadrangle 6. Kobari teaches specifying a centerline for the particular character string being placed along the centerline.

Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines. Kobari teaches drawing at least two horizontal prospective guide lines by drawing each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed

quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel.

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line, meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise

direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari does not expressly disclose the prospective guide lines. However, Kobari teaches a typeline where the characters are positioned/placed horizontally along the center of each rectangle and thus the typeline is the centerline implicitly taught by Kobari. Kobari expressly disclose at Drawing #5 that the guide lines are arranged at regular intervals.

For the reasons above, Imhof and/or Edmondson teaches horizontally positioning/placing along the center of each bounding rectangle with horizontal guide lines. Imhof teaches at FIGS. 16-17 that the grid lines (guide lines) are arranged at regular intervals.

Fushiki et al. discloses producing scan lines to determine string placement (Fig. 4a). Fushiki teaches at Fig. 6 and column 6 that the region's perimeter will not intersect text written

within the region in which the text is placed within the rectangle box 530 and/or Rectangle 532 wherein the text includes at least one character string placed along the centerline of the rectangle box 530 and/or Rectangle 532 that is located at the center of the prospective guide lines that are longer than the longest horizontal segment of the area of the character string because the character string is placed within the text box. At least the five guide lines in Fig. 6 are arranged in parallel and at least one character string (of the text) is placed along the center line of the text box 530 or the text box 532.

It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a label.

In re claim 4, Kobari at least implicitly teaches or suggests the claim limitation of adjusting placement to move the placed character string vertically or horizontally within the demarcated region [Paragraph 0026].

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line which meets the claimed a prospective guide line. Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon

that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches adjusting or re-arranging the character string to move the placed character string vertically or horizontally within the polygon----the demarcated region.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 6 and one centerline. Additionally, Kobari teaches at least more guide lines including at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari shows in the Figures prospective guide lines, but does not expressly use the wording of the prospective guide lines in the Specification. However, Fushiki et al. discloses producing scan lines to determine string

placement (Fig. 4a). It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a label. Moreover, it also needs to be shown whether Kobari and Fushiki disclose specifying the one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines in a vertical direction. However, Ozawa discloses a computer program of placing character string aligned with horizontal lines including the centerline and specifying a centerline so as to place the character string along the centerline (Ozawa Figs. 22A-22B as disclosing specifying the centerlines of the bounding boxes and Fig. 26A-26B as disclosing placing a character string in a bounding box). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Ozawa or Imhof and/or Edmondson's specifying a centerline or typeline of a bounding box and placing a character string along the centerline or typeline within the bounding box wherein each bounding box further comprises at least two horizontal guide lines. One of the ordinary skill in the art would have been motivated to place the character string in the center of the bounding box (Ozawa Figs. 26A-26B and Kobari Drawing #3 and Drawing #8).

Kobari at least implicitly teaches at Draings#6, Draing#8 and Drawing#9 the claim limitation of centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character

string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches adjusting or re-arranging the character string to move the placed character string vertically or horizontally within the polygon----the demarcated region.

Kobari et al. and Fushiki et al. do not expressly disclose placing the label in the center. However Freeman et al. discloses placing the label into the geographic center (Column 8 lines 21-40). It would have been obvious to one of ordinary skill to not only choose the middle of the scan lines from Kobari et al. and Fushiki et al but also to center it on the lines from Freeman with the motivation of having better placement for label for maps such a soil survey maps.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524),

Freeman et al. (US Pat. No. 5,724,072), Freeman et al. (US Pat. No. 5,724,072), Imhof and Edmondson.

In re claims 6, 7,

Kobari teaches a computer program product embodied in a tangible non-transitory computer readable medium, the computer program product being configured to optimize character string placement by performing operations (Drawing#2) comprising:

a first horizontal placement or a first tilting placement (*Kobari teaches at Drawing#5 a horizontal placement. Kobari teaches at Drawing#4 and Drawing#6 a tilting placement or inclination placement*) on all demarcated regions (*Kobari teaches at Drawing#6 a demarcated region and at Drawing#4 and Drawing#6 placing character strings on other demarcated regions, See Paragraph 0008-0028*);

a pull-out placement (*Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed within/outside of the polygon. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard*) on each demarcated region in which the first horizontal placement or the first tilting placement cannot be

performed (*Kobari teaches at Drawing#6 a pull-out placement in which the first horizontal placement cannot be performed. Kobari teaches at Drawing#7 a pull-out placement of the character string on a demarcated region in which the tilting placement cannot be performed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*), assuming that the character string placed in the first horizontal placement or the first tilting placement has not been placed (*Kobari teaches at Drawing#6 that the first horizontal placement has not been placed. Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed outside of the polygon 4 and the first tilting placement has not been placed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*);

a second horizontal placement or a second tilting placement to place the character string placed in the first horizontal placement or the first tilting placement, and, when the placement cannot be performed because of the character string placed through the pull-out placement hindering the placement (*Kobari teaches at Drawing#6 a pull-out placement of the character string on the demarcated polygon region and at Drawing#7 a pull-out placement of the character string in the demarcated polygon region. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the*

check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches re-arranging the character string either in a horizontal direction or in a inclination direction in a position included by the polygon wherein re-arrangement inherently involves a second horizontal placement or a second inclination placement to place the character string so as to include the character string in the polygon without pulling-out placement of the character string. Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string), thereby placing the character string through the second horizontal placement or the second tilting placement (*Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard*);

a entering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Kobari Drawing#3, Drawing #6 and Drawing#8 where each character string is placed uniformly on a demarcated region).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Imhof teaches a computer program product embodied in a tangible non-transitory computer readable medium, the computer program product being configured to optimize character string placement by performing operations (Page 136-137 and Figs. 55-60 where each character string is placed uniformly on a rectangle map region) comprising:

drawing prospective guide lines as virtual horizontal lines arranged in parallel at regular intervals in the demarcated region (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including*

boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters);

selecting, from among the prospective guide lines, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of a character string (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters*);

specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are*

placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters); and

placing the character string along said one of the specific prospective guide lines (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters*); and

a first horizontal placement or a first tilting placement on all demarcated regions (Figs. 6-15 for example, Fig. 6 shows a tilting placement and Fig. 10 shows horizontal placement);

a pull-out placement on each demarcated region in which the first horizontal placement or the first tilting placement cannot be performed, assuming that the character string placed in the first horizontal placement or the first tilting placement has not been placed (Figs. 16-18 and Figs. 57-60; for example, Fig. 16 shows a pull-out placement of character names outside of the tile boundaries and Fig. 58 shows pull-out placement too close to the border or outside of the demarcated region and Fig. 28 shows a pull-out placement on each demarcated region boundary);

a second horizontal placement or a second tilting placement to place the character string placed in the first horizontal placement or the first tilting placement, and, when the placement cannot be performed because of the character string placed through the pull-out placement hindering the placement (Figs. 25-28 and 57-60 where Fig. 25 shows pull-out placement and Fig. 26 shows a second horizontal placement. Fig. 28 shows a pull-out placement and Fig. 27 shows a second horizontal placement);

centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (*Figs. 8-15 and 57 and 59 where the character labels are placed uniformly within a rectangle region, an arbitrary demarcated region or a polygon region. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline of the grid lines, or a centerline of*

the boundary lines or a typeline of the labeling name characters and thus the names are placed along a centerline or a typeline of Page 137 or the centerline of the grid lines or the centerline of the boundary lines).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Edmondson teaches a computer program product embodied in a tangible non-transitory computer readable medium, the computer program product being configured to optimize character string placement by performing operations (Figs. 3-4) comprising:

drawing prospective guide lines as virtual horizontal lines arranged in parallel at regular intervals in the demarcated region (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

selecting, from among the prospective guide lines, specific prospective guide lines that are arranged in parallel and are longer than a longest horizontal segment of an area of a character string (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines arranged in parallel in a vertical direction (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where at least the baseline is located at the center of the arrangement of Fig. 3); and

placing the character string along said one of the specific prospective guide lines (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where character string is placed along said centerline); and

a first horizontal placement or a first tilting placement on all demarcated regions (Figs. 3-4);

a pull-out placement on each demarcated region in which the first horizontal placement or the first tilting placement cannot be performed, assuming that the character string placed in the first horizontal placement or the first tilting placement has not been placed (Figs. 9 and 14);

a second horizontal placement or a second tilting placement to place the character string placed in the first horizontal placement or the first tilting placement, and, when the placement cannot be performed because of the character string placed through the pull-out placement hindering the placement (Figs. 9 and 14);

centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where the character string is arranged uniformly).

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion

relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Kobari thus teaches that an adjusting/re-arranging placement to move the character string vertically or horizontally within the polygon when the character string cannot be placed through the first horizontal placement or the first tilting placement.

Kobari et al. and Fushiki et al. disclose the inclination of the line if it does not fit ([0015] - [0026]). Although Kobari implicitly teach the pull-out placement in the Drawing#7 as an intermediate step subject to re-arrangement of the character strings, Kobari et al. and Fushiki et al. do not expressly disclose pull out placement in a clear manner. However, Freeman et al. discloses the pull out placement (Column 5, lines 53- 65). It would have been obvious to combine the inclining and placement of the line and case method of inclining if the line doesn't fit of Kobari et al. and Fushiki et al. and add the case where the string can't fit inside and use the pop out method of Freeman et al. with the motivation of getting the better way to place the string.

Kobari at least implicitly teaches at Draings#6, Draing#8 and Drawing#9 the claim limitation of centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and

dots on character string region segments that demarcate the character string region are made uniform.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard.

Kobari et al. and Fushiki et al. disclose the inclination of the line if it does not fit ([0015] - [0026]). It is noted that Kobari et al. and Fushiki et al. do not expressly disclose pull out placement placing the label into the geographic center (Column 8 lines 21-40). However, Freeman et al. discloses the pop out placement (Column 5, lines 53-65) placing the label into the geographic center (Column 8 lines 21-40). It would have been obvious to combine the inclining and placement of the line and case method of inclining if the line doesn't fit of Kobari et al. and Fushiki et al. and add the case where the string can't fit inside and use the pop out method of Freeman et al. with the motivation of getting the better way to place the string.

Kobari at least implicitly teaches at Draings#6, Draing#8 and Drawing#9 the claim limitation of centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches adjusting or re-arranging the character string to move the placed character string vertically or horizontally within the polygon----the demarcated region.

Kobari et al. and Fushiki et al. do not expressly disclose placing the label in the center. However Freeman et al. discloses placing the label into the geographic center (Column 8 lines 21-40). It would have been obvious to one of ordinary skill to not only choose the middle of the

scan lines from Kobari et al. and Fushiki et al but also to center it on the lines from Freeman with the motivation of having better placement for label for maps such a soil survey maps.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524), Freeman et al. (US Pat. No. 5,724,072), Imhof, Edmondson, and Yoshimura et al. (Japanese Publication No. 9- 185696).

In re claims 8-9,

Kobari at least implicitly teaches at Draings#6, Drawing 7, Drawing#8 and Drawing#9 the claim limitation of a replacing placement, after the second horizontal placement or the second tilting placement in a re-arrangement of the character string, to place alternative display objects such as characters, other character strings, symbols, or graphics, instead of the character string that cannot be placed in the first horizontal placement or the first tilting placement, the pull-output placement, or second horizontal placement or the second tilting placement.

Edmondson at least implicitly teaches at Figs. 9 and 14 the claim limitation of a replacing placement, after the second horizontal placement or the second tilting placement in a re-arrangement of the character string, to place alternative display objects such as characters, other character strings, symbols, or graphics, instead of the character string that cannot be placed in the first horizontal placement or the first tilting placement, the pull-output placement, or second horizontal placement or the second tilting placement.

Imhof at least implicitly teaches at Figs. 16-18 and 57-60 the claim limitation of a replacing placement, after the second horizontal placement or the second tilting placement in a

re-arrangement of the character string, to place alternative display objects such as characters, other character strings, symbols, or graphics, instead of the character string that cannot be placed in the first horizontal placement or the first tilting placement, the pull-output placement, or second horizontal placement or the second tilting placement.

Kobari further teaches at Drawing#7 the pull-out placement again prior to the replacing placement in Drawing#9.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Thus, Kobari teaches placing other character strings.

It is noted that Fushiki et al and Fushiki et al. and Freeman et al. do not expressly disclose replacement placement. However, Yoshimura et al. discloses replacement placement [0118]. It would have been obvious to combine the “if”statement and string placement of Fushiki et al. and

Freeman et al. with the added if statement for replacement placement of Yoshimura et al. with the motivation of automatically shortening the string.

Claims 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) and Ozawa US Patent Application Publication 2004/0001628 (hereinafter Ozawa), Freeman et al. (US Pat. No. 5,724,072), E. Imhof, "Positioning Names on Maps", The American Cartographer, 1975, Vol. 2, No. 2, pp. 128-144 (hereinafter Imhof) and S. Edmondson, et al, "A General Cartographic Labeling Algorithm", Cartographica, 1997, Vol. 33, No. 4, pp. 13-23 (hereinafter Edmondson).

In re claim 11, Kobarai teaches a computer program product in a tangible non-transitory computer readable medium, the computer program product being configured to control a horizontal placement, the horizontal placement including the steps of:

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segment (*e.g., At Drawing #3, guide lines including at least two horizontal prospective guide lines within each circumscribed quadrangle 6 and at least one center line are drawn.*

Guide lines including at least two horizontal prospective guide lines for each circumscribed quadrangle 5 and at least one centerline of the quadrangles are drawn.

At Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed

quadrangle 5 of a polygon should have more than a character string width + threshold wherein the lines are drawn as virtual horizontal lines in the Drawing #6 as regular scan lines on a display at regular time intervals in the demarcated region 4);

Aligning an area in a character string region to a reference line of the imaginary guide lines, said area being positioned within said one of the demarcated region (*Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines along with the centerline of the quadrangle 6 (the centerline is the reference line). Kobari teaches drawing at least two horizontal prospective guide lines along with one centerline by drawing at least two horizontal lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or at least three horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel*);

Wherein said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area (*Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. Thus, Kobari's guide lines are longer than the area of the character string and Kobari's centerline is between adjacent ones of the guide lines for the circumscribed quadrangle.*

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses specifying a centerline as clearly indicated in the Drawing#5 and Drawing #8 that a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Imhof teaches a computer program product embodied in a tangible non-transitory computer-readable medium, the

computer program product being configured to control a horizontal placement, the horizontal placement including the steps of (Page 136-137 and Figs. 55-60 where each character string is placed uniformly on a rectangle map region or polygon region or a demarcated region):

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segments (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region; see Page 136, it is best to divide long names into two or three horizontal lines and each division should be a whole word; see also Figs. 16 and 18 where a plurality of guide lines are shown. See also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137. The typeline is a centerline of the labeling name characters.*

Moreover, Imhof teaches at FIGS. 55-56 the demarcated regions 3 with multiple guide lines and one of the multiple guide lines is a reference line of a character string);

Aligning an area in a character string region to a reference line of the imaginary guide lines, said area being positioned within said one of the demarcated regions (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines; see also Figs. 16 and 18 where a plurality of guide lines are shown; see also Fig. 62 for the plural horizontal guide lines. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline---*

reference line--- and thus the names are placed along a centerline or a typeline or reference line of Page 137.

Moreover, Imhof teaches at FIGS. 55-56 the demarcated regions 3 with multiple guide lines and one of the multiple guide lines is a reference line of a character string);

Wherein said reference line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated region being longer than said area (*Page 136-137 and Figs. 55-60 where the plural parallel horizontal guide lines are shown in Fig. 56---No 3 region and the labels/characters are placed within the plural guide lines at the center of each rectangle region where the centerline is inherently taught when the labels and characters are placed at the center of each rectangle region. Moreover, the characters and labels are placed in Figs. 16 and 18 along a plurality of guide/grid lines where at least one name label is placed along one of the specific prospective guide lines at the center of the grid lines. The labeling name characters are not only placed along the centerline of the grid lines, but also are placed along its own typeline/centerline of the labeling name characters. In yet another embodiment, at Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline and thus the names are placed along a centerline or a typeline of Page 137 where the typeline is the centerline of the labeling name characters.*

Moreover, Imhof teaches at FIGS. 55-56 the demarcated region 3 having at least four guide lines ad at least one reference line of the guide lines is between adjacent ones of the guide lines).

Moreover, the claim invention is old and well known in the conventional Cartographic Labeling Literature dated long time ago. For example, Long time ago, Edmondson teaches a computer program product embodied in a tangible non-transitory computer readable medium, the computer program product being configured to control a horizontal placement, the horizontal placement including the steps of (Figs. 3-4):

Locating imaginary guide lines in one of the demarcated regions, said one of the demarcated regions being bounded by demarcated region segments (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Aligning an area in a character string region to a reference line of the imaginary guide line, said area being positioned within said one of the demarcated regions (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines);

Wherein said reference line of the imaginary line of the imaginary guide lines is between adjacent ones of the imaginary guide lines, each of the imaginary guide lines in said one of the demarcated regions being longer than said area (Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where at least the baseline is located at the center of the arrangement of Fig. 3. Figs. 3-4 shows plural horizontal parallel guide lines including skylines and baselines and centerlines and swatch lines where the character string is arranged uniformly).

Applicant argues with respect to the Kobari reference that the guide lines of Kobari are arranged in parallel, but not at regular intervals. The Examiner respectfully disagrees. In a non-limiting example, when all guide lines are not arranged at a singular regular interval in which

guide lines arranged at a first regular interval and guide lines arranged at a second regular interval meets the claimed guide lines arranged at regular intervals, all guide lines are still arranged at regular intervals including the first regular interval and the second regular interval. Moreover, for argument's sake, even if Applicant may import limitations from the Specification, Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval. Kobari's three guide lines arranged in parallel in the first regular interval constitute two guide lines arranged in the first regular interval and two other guide lines arranged in the first regular interval. The three guide lines together are the claimed guide lines arranged in parallel at regular intervals.

Kobari teaches at Drawing #5 plural prospective guide lines embedded with the plural rectangles. The prospective guide lines for one rectangle are arranged in parallel at a first regular interval and the prospective guide lines for the other rectangle may be arranged in parallel at a second regular interval, meeting the claimed guide lines arranged at regular intervals.

Applicant further argues that Fig. 3 of Kobari only show two guide lines for the circumscribed quadrangle 6. The Examiner cannot concur. Fig. 3 of Kobari also shows a centerline. The centerline is clearly drawn in Fig. 3 of Kobari. Applicant ignores the centerline in Fig. 3 of Kobari for arguments' sake. The centerline in Fig. 3 of Kobari cannot be ignored. Kobari's Fig. 3 includes at least three guide lines including two guide lines for the circumscribed quadrangle 6 and one center line arranged at a regular interval.

Kobari further teaches selecting a rectangle to place a character string which is the same as specifying the respective parallel horizontal guide lines including a centerline for the

rectangle. Moreover, Kobari teaches at Drawing #3 specifying a centerline for the circumscribed rectangle 6. The centerline is specified so as a character string is placed along the centerline.

In Page 10 of Remarks, Applicant argues in essence with respect to the claimed placing the character string along one of the specific prospective guide lines.

In response, Kobari discloses at Drawing #3 at least three horizontal prospective guide lines including two guide lines for each circumscribed quadrangle 6 and one centerline for each circumscribed quadrangle 6. Kobari teaches specifying at least three guide lines including two horizontal prospective guide lines for each circumscribed quadrangle 5 and one centerline of each quadrangle as drawn in the figure, meeting the claimed prospective guide line(s). Kobari teaches selecting the circumscribed quadrangle 6 and selecting the prospective guide lines by selecting the circumscribed quadrangle 6 and placing the character string along the centerline of the prospective guide lines. Kobari teaches specifying a centerline so as to place a character string within the circumscribed quadrangle 6. Placing the character string within the circumscribed quadrangle 6 includes the steps of specifying the respective rectangle to place a character string within the circumscribed quadrangle 6 and placing the character string along the centerline of the quadrangle 6. Kobari teaches specifying a centerline for the particular character string being placed along the centerline.

Kobari discloses at Drawing #3 selecting at least two horizontal prospective guide lines by selecting each circumscribed quadrangle 6 containing the prospective guide lines. Kobari teaches drawing at least two horizontal prospective guide lines by drawing each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and

Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. At least one of the circumscribed quadrangles is selected to encompass a character string wherein the selected circumscribed quadrangle has at least two prospective guide lines drawn in parallel.

Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line,

meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari does not expressly disclose the prospective guide lines. However, Kobari teaches a typeline where the characters are positioned or placed horizontally along the center of each rectangle and thus the typeline is the centerline implicitly taught by Kobari. Kobari expressly disclose at Drawing #5 that the guide lines are arranged at regular intervals.

For the reasons above, Imhof and/or Edmondson teaches horizontally positioning/placing along the center of each bounding rectangle with horizontal guide lines. Imhof teaches at FIGS. 16-17 that the grid lines (guide lines) are arranged at regular intervals.

Fushiki et al. discloses producing scan lines to determine string placement (Fig. 4a). Fushiki teaches at Fig. 6 and column 6 that the region's perimeter will not intersect text written within the region in which the text is placed within the rectangle box 530 and/or Rectangle 532 wherein the text includes at least one character string placed along the centerline of the rectangle box 530 and/or Rectangle 532 that is located at the center of the prospective guide lines that are longer than the longest horizontal segment of the area of the character string because the character string is placed within the text box. At least the five guide lines in Fig. 6 are arranged in parallel and at least one character string (of the text) is placed along the center line of the text box 530 or the text box 532.

It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a label.

Claim 12:

The cited references further teach the claim limitation that none of said imaginary guide lines intersect any other of said imaginary guide lines (Kobari Drawings 3-6 and Imhof FIGS. 55-56 for the demarcated region 3).

Claim 13:

The cited references further teach the claim limitation that said imaginary guide lines are spaced apart at regular intervals, distances between said imaginary guide lines being uniform (Kobari Drawings 3-6 and Imhof FIGS. 55-56 where the three guide lines for each character string include the two lines bounding the character strings and the centerline for each character string).

Claim 14:

The cited references further teach the claim limitation of aligning said character string region to the longest one of the demarcated region segments (*Kobari teaches at Drawing#5 a horizontal placement. Kobari teaches at Drawing#4 and Drawing#6 a tilting placement or inclination placement*. See Imhof FIGS. 8-15 where the character string is tilted so as to be placed along the longest one of the demarcated region segments. See Imhof FIGS. 54 and 56-57 where the character string is placement to the longest one of the demarcated region segments. Other segments can be drawn, but any other segments would not be the longest one of the demarcated region segments).

Claim 15:

The cited references further teach the claim limitation that the computer program product being configured to control a pull-out placement, the pull-out placement including the steps of (*Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed within/outside of the polygon. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard*): placing said character

string region in a neighboring one of the demarcated regions (*Kobari teaches at Drawing#7 and Imhof FIGS. 8-15 and 16-18*); aligning said character string region to said longest one of the demarcated region segments, said longest one of the demarcated region segments bordering said one of the demarcated regions and said neighboring one of the demarcated regions (*Kobari teaches at Drawing#7 and Imhof FIGS. 8-15 and 16-18 where at least one character string is subject to the pull-out placement outside of the demarcated regions*).

Claim 16:

The cited references further teach the claim limitation that said pull-out placement is to be executed only when either said horizontal placement or said tilting placement cannot be performed (*Kobari teaches at Drawing#7 and Imhof FIGS. 8-15 and 16-18 where at least one character string is subject to the pull-out placement outside of the demarcated regions where the demarcated regions are too small to perform the horizontal placement or tilting placement*).

Claim 17:

The cited references further teach the claim limitation that other imaginary guide lines are in said neighboring one of the demarcated regions during said pull-out placement, said area being aligned with a reference line of the other imaginary guide lines (*Kobari teaches at Drawing#7 and Imhof FIGS. 8-15 and 16-18 and 30 where at least one character is subject to pull-out placement, said area of the character string being aligned with a reference line of the other imaginary guide lines of said neighboring one of the demarcated regions*).

Claim 18:

The cited references further teach the claim limitation that said character string region is aligned with the longest one of the demarcated region segments during said pull-out placement (*Kobari teaches at Drawing#7*).

Claim 19:

The cited references further teach the claim limitation that said character string region includes a character string (*Kobari teaches at Drawing#7 and Imhof FIGS. 8-15 and 16-18*).

Claim 20:

The cited references further teach the claim limitation that said character string is movable vertically or horizontally within said one of the demarcated regions or within said neighboring one of the demarcated regions (*Imhof FIGS. 10-11 where the character string "Haiti" is movable vertically or horizontally within said one of the demarcated regions or within said neighboring one of the demarcated regions*).

Claim 21:

The cited references further teach the claim limitation that said character string region has multiple segments, the longest of the segments being said area (Imhof FIGS. 56-57 the demarcated region 3 has two segments, the longest of the segments being said area).

Claim 22:

The cited references further teach the claim limitation that one of the segments is adjacent to another of the segments, said one of the segments being configured to include said character string and said another of the segments being configured to include another character string (Imhof FIGS. 56-57).

Claim 23:

The cited references further teach the claim limitation that said character string is replaced with an alternative display object when said character string cannot be placed within said one of the segments (*Imhof FIGS. 10-11 where the character string "Haiti" is movable vertically or horizontally within said one of the demarcated regions or within said neighboring one of the demarcated regions. The character string "Haiti" of FIG. 10 cannot be placed in the demarcated region of FIG. 11 and thus is replaced with an alternative smaller display object "Haiti"*).

Claim 24:

The cited references further teach the claim limitation that said character string is replaced with an alternative display object when said character string cannot be placed within said one of the demarcated regions during either said horizontal placement of said tilting placement and when said character string cannot be placed within said neighboring one of the demarcated regions during said pull-out placement (*Imhof FIGS. 10-11 where the character string "Haiti" of FIG. 10 cannot be placed in the demarcated region of FIG. 11 during a pull-out placement or a tilting placement and thus the character string "Haiti" is movable vertically or horizontally within said one of the demarcated regions or within said neighboring one of the demarcated regions. The character string "Haiti" of FIG. 10 cannot be placed in the demarcated region of FIG. 11 and thus is replaced with an alternative smaller display object "Haiti"*).

Claim 25:

The cited references further teach the claim limitation that the computer program product being configured to control a centering placement, the centering placement including the step of

centering said character string between two of the demarcated region segments, said centering placement to be executed after said horizontal placement or said tilting placement has been performed (*Imhof Figs. 8-15 and 57 and 59 where the character labels are placed uniformly within a rectangle region, an arbitrary demarcated region or a polygon region. At Page 134—Section D, Imhof teaches horizontally positioning and placing names along the lines to which they refer including boundary lines where the lines include a centerline of the grid lines, or a centerline of the boundary lines or a typeline of the labeling name characters and thus the names are placed along a centerline or a typeline of Page 137 or the centerline of the grid lines or the centerline of the boundary lines*).

Claim 26:

The cited references further teach the claim limitation of an apparatus for optimizing character string placing (Kobari Drawing #2).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIN-CHENG WANG whose telephone number is (571)272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jin-Cheng Wang/
Primary Examiner, Art Unit 2628